

OAK RIDGE NATIONAL LABORATORY

MANAGED BY UT-BATTELLE FOR THE DEPARTMENT OF ENERGY

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July 19, 2005

Mr. Jack Zimmerman
DUF₆ Conversion Project
Portsmouth/Paducah Project Office
1017 Majestic Drive, Suite 200
Lexington, KY 40513

Dear Mr. Zimmerman:

Evaluation of UDS ALARA Analysis, DUF6-G-Q-STU-001, Revision 2, June 2005

Attached is a revised expert evaluation by ORNL's consultant, J. Robert Hightower Jr., of UDS's revised ALARA analysis, DUF6-G-Q-STU-001 Rev. 2. In Dr. Hightower's opinion, the revised analysis adequately supports the free release of the hydrofluoric acid produced in the DUF₆ Conversion Project.

If you need further information, please call me at (865) 576-6845.

Sincerely,



C. P. McGinnis
Nuclear Science and Technology Division

c: S. R. Greene
R. M. Wham
S. R. Martin, Jr., ORO Site Office

**J. Robert Hightower, Jr. PhD
104 Scenic Drive
Oak Ridge, Tennessee
37830-4211**

July 18, 2005

Mr. Phil McGinnis
Nuclear Science and Technology Division
Oak Ridge National Laboratory
P. O. Box 2008
Oak Ridge, Tennessee 37831-6154

Dear Mr. McGinnis:

Evaluation of UDS ALARA Analysis, DUF6-G-Q-STU-001, Revision 2, June 2005

I participated with the Department of Energy Integrated Project Team (IPT) in evaluating an updated ALARA analysis prepared by Uranium Disposition Services, LLC, in support of the free release of hydrofluoric acid and calcium fluoride produced in DUF₆ conversion. This evaluation updated an evaluation of Rev 0 of the subject report that was prepared by experts from Argonne National Laboratory (ANL), under subcontract to Oak Ridge National Laboratory. The conclusion of the team evaluation is that the updated analysis by UDS adequately supports the sale and use of hydrofluoric acid as desired by the Department of Energy.

From the earlier evaluation ANL stated: "... the [ANL]review team has determined that the dose analyses described in the UDS ALARA Analysis Report for worker and non-worker members of the public expected to be involved in the sale and use of AqHF and CaF₂ conversion products are reasonable and follow a commonly accepted approach. Also, the team concludes that a reasonable range of alternative release limits for sale and use of AqHF and CaF₂ is analyzed and that the level of analysis for health detriment costs is appropriate...." However, the evaluation listed areas where the report could be enhanced by adding additional explanation and justification. The IPT requested that UDS address those areas identified by ANL. The revised report (Rev. 2) issued by UDS has satisfactorily addressed all the areas for enhancement identified by ANL related to the free release of the hydrofluoric acid.

However, in listing areas where the report may be enhanced, the ANL report pointed out that "Additional information appears to be needed to support release under proposed authorized limits of CaF₂ for direct disposal in off-site, non-DOE landfills not authorized by the NRC or an Agreement State to receive low-level radioactive waste." This issue was not specifically addressed in the revised evaluation, but this does not affect the utility of the analysis in supporting the release of hydrofluoric acid. Furthermore, if the hydrofluoric acid is released for sale there will be no need for free release of any CaF₂ that is produced from neutralization of the hydrofluoric acid.

If you need additional information, please call me at (865) 482-3348.

Sincerely,



J. Robert Hightower, Jr. PhD